

DART AEROSPACE LTD	Work Order:	23967
Description: Crosstube Extrusion (206B)	Part Number:	D6003-102
Drawing: D6003 Rev. A	Qty:	15

Step	Location	Procedure	By	Date	qty
1	EXPEDITING	Open W/O	LL	0808.05	15
2	PURCHASING	Issue P/O: 2008430 a) Extrude as per Dwg D6003 b) Material: 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) seamless aluminum tube c) Minimum ultimate tensile strength =77 ksi d) Minimum tensile yield strength = 66 ksi g) Material certification required			
3	RECEIVING	Receive and Inspect for transit damage Ensure Material certification is attached	CL	05/08/05	15
4	QC	Inspect Level 6 Ensure Material certification comply to Dwg D6003	CL	05/10/31	18
5	FINISHING	Chemical conversion coat as per QSI 005 4.1	MF		
6	STORES	Identify and Stock	CL	07/12/04	18
7	EXPEDITING	Close W/O Cost / part	Inspect Level 21	07/12/01	18

Rev	Date	Change	Revised By	Approved
A	00.11.21	New Issue	EC	
B	00.12.06	Added: Issue P/O	EC	

RELEASED

EE 00.12.07

W/O:

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

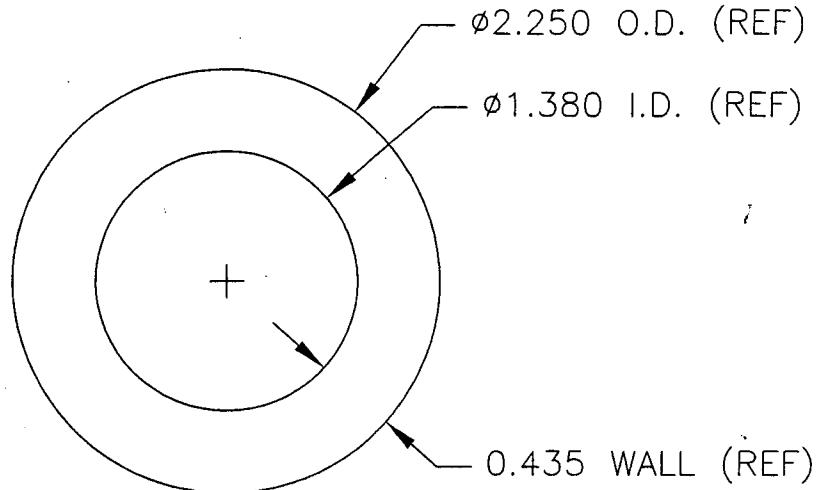
QA: N/C Closed: _____ Date: _____



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D6003
DATE		REV. A
00.11.22		SHEET 1 OF 1
A	00.11.22	SCALE 1:1
		NEW ISSUE

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24



SHOP COPY

RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. _____

NOTES

1) D6003-XXX CROSSTUBE

LENGTH

WHERE XXX IS LENGTH IN INCHES

EG. 102" LONG TUBE: D6003-102

- 2) MATERIAL: 2.250 OD x 0.435 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.020 MEAN (± 0.044 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

Copyright © 2000 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

0000000000

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Aug 04, 2005
03:24 pm

Work Order No : 0023967
Project Name : D6003-102
Project For : WK543
Work Order Type : Main
Main WO Number :
House Part Number : D6003-102
Description : Crosstube
Manufactured : Yes
Amount Req'd : 15
Amount Done : 0
Start Date : 08-04-05
Est Finish Date : 10-29-05
Act Finish Date :
Drawings Reqd : No
Ok for Approval :
Approval Rec'd :
Department Code:
Burden Flags : NNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	0.00	0.00		
Production Cost	0.00	0.00	0.00	0.00	0.00
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	0.00	0.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
Burden	0.00	0.00	0.00		
Total Cost	0.00	0.00	0.00		
Margin	0.000	0.000			
Selling Cost	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	0.00	0.00
Profits/(Loss)	0.00	0.00



Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde: Client:	Dart Aerospace Ltd.		Zeugnisnummer: 721/05
	1270 Aberdeen Street K6A1K/ Hawkesbury, ON Canada		Cert No.: / No. du certificat: 2008430
Produkt: Product / Produit:	Rohre nahtlos gepresst Tubes seamless extruded Tubes file sur aiguille		Bestellnummer: Order No. / No. de commande 15301/3
Spezifikation: Specification:	AMS - QQ - A - 200/11E, Spezifikation D6003		Auftrag: Our Reference/Notre Reference:
Werkstoff: Alloy/Alliage:	7075	Zustand: Temper/Etat	T 6511
Abmessung Size / Dimension	2,250 INCH D6003-102	x 1,380 INCH x 0,435 INCH x 102,000 INCH	
Kennzeichnung Marking/Marquage:	ALUnna-Cert No.721/05-7075-T6511-cast No.01402194-AMS-Qqa-200/11E-2.250" X 0.435"Wall-Heat no.85/09- Lot15301/3-1-P.O.2008430		
Lieferung Delivered Material / Matériel délivré:	18	pcs.	lbs 461

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ Cast No.	Si min. max.	Fe min. max.	Cu min. max.	Mn min. max.	Mg min. max.	Cr min. max.	Zn min. max.	Ti min. max.	Pb min. max.	Zr min. max.	Bi min. max.	Sn min. max.	Ni min. max.	
01402194	0,10	0,21	1,39	0,03	2,44	0,20	5,85	0,03	0,00	0,02				

Elements without indication < 0,01 %

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tonnile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat No.
min. max.	77,0	66,0				
1	85,985	79,750	10,0		167	85/09 - 18 pcs.

**Ergebnis der
Prüfungen:** Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats: Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

KroosD

27.09.2005



Certified acc. to DIN EN ISO 9001:2000, valid until 2006-03-09
Certificate No.: 001959 QM

ALUnna

Abnahmbeauftragter

Jason Murdoch

From: David Shepherd [davids@dart Aero.com]
Sent: November 9, 2005 9:28 AM
To: Jason Murdoch
Subject: Re: extrusion

The risk of corrosion is way down this time of year because the humidity is way down. Therefore, I don't see a problem holding off on the alodine for a few weeks until you have more time. With respect to the 412 Tri-beam stuff, I agree. I would just skip the alodining step and start machining it right away.

David

----- Original Message -----

From: Jason Murdoch
To: davids@dart Aero.com
Sent: Tuesday, November 08, 2005 8:50 AM
Subject: extrusion

Hi Dave,

We have a bunch of x-tube mat'l that came in and I was wondering since it's coated in a lubricant if it should be alodined within a certain time frame or if at all? It's on the w/o so I think it should be but time is very unavailable at the moment. But my biggest concern is the tri-beam ends mat'l. I think that can wait seeing as it's a work in progress and trial and error in bending.

jmurdoch@dart Aero.com

Q.C. Inspector